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EXAMINER

WANG, JIN CHENG

ART UNIT PAPER NUMBER

2672

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/072,043		PRIEM, CURTIS R.	
	Examiner		Art Unit	
	Jin-Cheng Wang		2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 12, 13, 16-20, 24-28, 33-36, 39, 41-43, 46-50 and 53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-13, 16-20, 24-28, 33-36, 39, 41-43, 46-50, and 53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

By

DETAILED ACTION

Response to Amendment

Applicant's submission filed on 11/28/2005 has been entered. Claims 1, 4, 12-13, 24-26, 33, 46-50 and 53 have been amended. Claims 7-11, 14-15, 21-23, 29-32, 37-38, 40, 44-45, 51-52 and 54 have been canceled. Claims 1-6, 12-13, 16-20, 24-28, 33-36, 39, 41-43, 46-50, and 53 are pending in the application.

Response to Arguments

Applicant's arguments filed November 28, 2005 have been fully considered but are not found persuasive in view of the new ground(s) of rejection set forth below.

As address below, the amended Claim 1 is unpatentable over Lobodzinski U.S. Patent No. 5,734,873 (hereinafter Lobodzinski) in view of U.S. Patent No. 5,999,199 (hereinafter Larson).

For example, Lobodzinski lacks an explicit disclosure of the register file 46 and the graphics engine 48 being integrated in a single chip and therefore is silent to the claim limitation of "the graphics controller comprising a second memory dedicated to holding information read from the font array."

However, Larson teaches a graphics controller (e.g., the graphics processor 100 of Larson Figs. 4-5) including a graphics engine (3D engine 150 of Larson Fig. 5) and Register File 135 and therefore the register file and the graphics engine has been integrated in a single chip.

It would have been obvious to have incorporated the Larson's teaching of a single chip design of the graphics controller including the register file and the graphics engine. Lobodzinski

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teaches both a register file 46 and a graphics engine 48 within the display controller 30 (See Lobodzinski Fig. 2) wherein the register file can be integrated into the graphics engine in a single chip design according to Larson (See Larson Fig. 4-5). Thus, The combination of Larson with Lobodzinski teaches the claim limitation of the graphics controller (formed by the graphics engine 48 and the register file 46 in a single chip design) comprising a second memory (Text engine registers) dedicated to holding information (character font information and character string information including the font address array; see Lobodzinski column 3-5 and Table I) read from the font array (the font array stored with the frame buffer; see Lobodzinski Figs. 3A and 4A).

One of the ordinary skill in the art would be motivated to do this because register file and the graphics engine can be integrated into the graphics controller in a single chip design (Larson Figs. 4-5).

Lobodzinski further discloses the text engine reads through the string of character indexes (see column 3, lines 30-33 and Fig. 5) and width vectors, **calculates the address of the character**, updates the X-coordinate in the viewport 58 and instructs the BLT engine 50 to perform a screen-to-screen color expanded BLT of the monochrome image. The address registers listed in Table 1 include a TXE Font Address register, the TXE String address register, TXE height register and TXE character count register. Lobodzinski discloses the text engine calculates the address information for these registers. Therefore, Lobodzinski discloses a first register for holding glyph information for a character in the font including one of the TXE address registers for holding glyph information for a character in the font. Lobodzinski discloses a TXE Font address register that specifies an address for the font array for the font. Lobodzinski further

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discloses a third register that contains an index to the character in the font array (TXE String address register contains linear dword address of character indexes and width vector for string to be drawn; see Table 1 and Fig. 5).

In Fig. 5, the character width and height information is specified using the font address and the character indexes wherein the character indexes point to the locations of the image lines for the character to be drawn and thus specifies the character height information and the character width information is specified in the address FA. Therefore, Lobodzinski discloses width and height information for the character is located in the font array using the address and the index. Thus, Lobodzinski discloses the claim limitation of “wherein width and height information for the character is located in the font array using the address and the index in combination, wherein the size of the character is determined according to which of the font arrays is selected.”

Moreover, Lobodzinski discloses the text engine reads through the string of character indexes and width vectors and calculates the address of the character and therefore Lobodzinski discloses loading/reading from the first memory into the first register because character glyph information are located in any of the text engine registers listed in Table 1.

Moreover, Lobodzinski discloses a bounding box having the background color is defined in the register file 46 (column 8, lines 55-57) which is part of a graphics controller in accordance with the argument set forth in the above. Therefore, Lobodzinski discloses the added claim limitations set forth in the claim 1.

Remarks: The first memory as claimed may also be a separate memory such as the memory 24 of Fig. 1 or a system memory in the processor (see column 3, lines 2-5) and the

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display driver executed by the processor 22 **sends image data defining one or more fonts to the display controller 30** to be stored in the frame buffer. Therefore, the display controller 30 also meets the claim limitation of “a graphics controller”.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 12-13, 16-20, 24-28, 33-36, 39, 41-43, and 46-47 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For example, the amended base claim 1 (26) recites the new claim limitation of “the data structure including a plurality of font arrays.” It cannot be ascertained from the specification what “font array” means. No specific definition of the term “font array” can be found from applicant’s specification. It is noted that the applicant’s Fig. 5 has described font array 460 and font array 462. However, the composition of the font array 460 and the font array 462 are not described. Whatever the “font array” may be, it is used as “an array of font characters”— as opposed to, for example, “an array of a plurality of fonts”. In applicant’s specification of Page 9, it is stated that “each of the font arrays 460 and 462 include information concerning the size of each character and an index that indicates the location of each font character within the font array”, meaning that applicant’s font array is an array of a plurality of font characters, rather than

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an array of a plurality of fonts. Therefore, the metes and bounds of the coverage of at least base claim 1 (26) cannot be ascertained.

To comply with the “written description” requirement of 35 U.S.C. 112, first paragraph, an applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the “written description” inquiry, whatever is now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Fed. Cir. 1991). For purposes of written description, one shows “possession” by descriptive means such as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention. *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed. Cir. 1997). Such descriptive means cannot be found in the disclosure for the inventions of the base claims 1 and 26.

Claims 2-6, 12-13, 16-20 and 24-25 depend upon the claim 1 and are rejected due to their dependency on the claim 1. The claim 27-28, 33-36, 39, 41-43 and 46-47 depends upon the base claim 26 and is rejected due to their dependency on the claim 26.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 12-13, 16-20, 24-28, 33-36, 39, 41-43, and 46-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example, the amended base claim 1 (26) recites the new claim limitation of “the data structure including a plurality of font arrays.” It cannot be ascertained from the specification what “font array” means. No specific definition of the term “font array” can be found from applicant’s specification. It is noted that the applicant’s Fig. 5 has described font array 460 and font array 462. However, the composition of the font array 460 and the font array 462 are not described. Whatever the “font array” may be, it is used as “an array of font characters”– as opposed to, for example, “an array of a plurality of fonts”. In applicant’s specification of Page 9, it is stated that “each of the font arrays 460 and 462 include information concerning the size of each character and an index that indicates the location of each font character within the font array”, meaning that applicant’s font array is an array of a plurality of font characters, rather than an array of a plurality of fonts. Therefore, applicant failed to particularly point out the term “font array” and distinctly claim the subject matter which applicant regards as the invention. The meaning of “font array” set forth in at least the base claim 1 (26) cannot be ascertained.

Claims 2-6, 12-13, 16-20 and 24-25 depend upon the claim 1 and are rejected due to their dependency on the claim 1. The claim 27-28, 33-36, 39, 41-43 and 46-47 depends upon the base claim 26 and is rejected due to their dependency on the claim 26.

Claims 48-50 and 53 are rejected under 35 U.S.C. 112; second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example, the amended base claim 48 recites the new claim limitation of “wherein to render the character the central processing unit is required to transfer.” Whether to render the character by the central processing unit, to render the character in the central processing unit, or

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to render the character with the instruction from the central processing unit. Applicant failed to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The role of "the central processing unit" set forth in at least the base claim 48 cannot be ascertained.

The claims 49-50 and 53 depends upon the base claim 48 and is rejected due to their dependency on the claim 48.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 12-13, 16-20, 24-28, 33-36, 39, 41-43, 46-50, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lobodzinski U.S. Patent No. 5,734,873 (hereinafter Lobodzinski) in view of U.S. Patent No. 5,999,199 (hereinafter Larson).

1. Claim 1:

Lobodzinski teaches a system for rendering fonts (see figure 1 of the reference, column 1, lines 53-67, column 2, lines 1-6, column 2, lines 40-57) the system comprising:

A first memory (e.g., frame buffer 56 of figure 2; column 2, lines 58-67; column 3, lines 1-10) having stored therein a data structure (e.g., figures 3-7, column 3, lines 11-33; column 4, lines 1-4), the data structure including a plurality of font arrays (*e.g., font 1 and font 4 of*

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reference sign 62a is the first font array disclosed in Fig. 4A of the cited reference with each font determines the size of the plurality of the font characters associated with each font. The font 2 of reference sign 62b of figure 3 or 4A in the cited reference is the second font array wherein the font 2 determines the size of a plurality of font characters associated with each font; The font 3 of the reference sign 62c in Fig. 4A is the third font array. Lobodzinski teaches in column 5, lines 49-54 that sizes of individual character fonts can vary and the number of characters in a font set can be as high as 64 K, but typical font sizes and the amount of available frame buffer memory will limit the actual number of characters in a font); and

A graphics controller (e.g. the graphics controller 30 of figure 2) coupled to the first memory (e.g., the frame buffer memory 56; see column 3, lines 4-5), the graphics controller accessing a font array of the data structure (e.g., figure 2, 3A and 4A).

Lobodzinski lacks an explicit disclosure of the register file 46 and the graphics engine 48 being integrated in a single chip and therefore is silent to the claim limitation of “the graphics controller comprising a second memory dedicated to holding information read from the font array.”

However, Larson teaches a graphics controller (e.g., the graphics processor 100 of Larson Figs. 4-5) including a graphics engine (3D engine 150 of Larson Fig. 5) and Register File 135 and therefore the register file and the graphics engine has been integrated in a single chip.

It would have been obvious to have incorporated the Larson’s teaching of a single chip design of the graphics controller including the register file and the graphics engine. Lobodzinski teaches both a register file 46 and a graphics engine 48 within the display controller 30 (See Lobodzinski Fig. 2) wherein the register file can be integrated into the graphics engine in a single

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chip design according to Larson (See Larson Fig. 4-5). Thus, The combination of Larson with Lobodzinski teaches the claim limitation of the graphics controller (formed by the graphics engine 48 and the register file 46 in a single chip design) comprising a second memory (Text engine registers) dedicated to holding information (character font information and character string information including the font address array; see Lobodzinski column 3-5 and Table I) read from the font array (the font array stored with the frame buffer; see Lobodzinski Figs. 3A and 4A).

One of the ordinary skill in the art would be motivated to do this because register file and the graphics engine can be integrated into the graphics controller in a single chip design (Larson Figs. 4-5).

Lobodzinski further discloses the text engine reads through the string of character indexes (see column 3, lines 30-33 and Fig. 5) and width vectors, **calculates the address of the character**, updates the X-coordinate in the viewport 58 and instructs the BLT engine 50 to perform a screen-to-screen color expanded BLT of the monochrome image. The address registers listed in Table 1 include a TXE Font Address register, the TXE String address register, TXE height register and TXE character count register. Lobodzinski discloses the text engine calculates the address information for these registers. Therefore, Lobodzinski discloses a first register for holding glyph information for a character in the font including one of the TXE address registers for holding glyph information for a character in the font. Lobodzinski discloses a TXE Font address register that specifies an address for the font array for the font. Lobodzinski further discloses a third register that contains an index to the character in the font array (TXE String

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address register contains linear dword address of character indexes and width vector for string to be drawn; see Table 1 and Fig. 5).

In Fig. 5, the character width and height information is specified using the font address and the character indexes wherein the character indexes point to the locations of the image lines for the character to be drawn and thus specifies the character height information and the character width information is specified in the address FA. Therefore, Lobodzinski discloses width and height information for the character is located in the font array using the address and the index. Thus, Lobodzinski discloses the claim limitation of “wherein width and height information for the character is located in the font array using the address and the index in combination, wherein the size of the character is determined according to which of the font arrays is selected.”

Moreover, Lobodzinski discloses the text engine reads through the string of character indexes and width vectors and calculates the address of the character and therefore Lobodzinski discloses loading/reading from the first memory into the first register because character glyph information are located in any of the text engine registers listed in Table 1. Moreover, Lobodzinski discloses a bounding box having the background color is defined in the register file 46 (column 8, lines 55-57) which is part of a graphics controller in accordance with the argument set forth in the above. Therefore, Lobodzinski discloses the added claim limitations set forth in the claim 1.

Remarks: The first memory as claimed may also be a separate memory such as the memory 24 of Fig. 1 (see column 3, lines 2-5) and the display driver executed by the processor 22 sends image data defining one or more fonts to the display controller 30 to be stored in the

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frame buffer. Therefore, the display controller 30 also meets the claim limitation of “a graphics controller”.

Claim 2:

The claim 2 encompasses the same scope of the invention as that of claim 1 except additional claimed limitation of “a frame buffer.” However, Lobodzinski further discloses claimed invention of a frame buffer (e.g., reference numeral 56 of figure 2).

Claim 3:

The claim 2 encompasses the same scope of the invention as that of claim 1 except additional claimed limitation of “a system memory.” However, Lobodzinski further discloses claimed invention of a system memory (e.g., reference numeral 24 of figure 1 or reference numeral 56 of figure 2).

Claim 4:

The claim 4 encompasses the same scope of the invention as that of claim 1 except additional claimed limitation of “a plurality of characters.” However, Lobodzinski further discloses claimed invention that font 1 comprises a plurality of characters C0-C256 and font 2 comprises a plurality of characters C0-C96 (e.g., figure 3A). Therefore, the claim 4 is rejected for the reason as set forth above.

Claim 5:

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The claim 5 encompasses the same scope of the invention as that of claim 4 except additional claimed limitation of “each of the characters comprises one bit per pixel.” However, Lobodzinski further discloses claimed invention that each of the characters C0-C256 comprises one bit per pixel (e.g., figure 3A). Therefore, the claim 5 is rejected for the reason as set forth above.

Claim 6:

The claim 6 encompasses the same scope of the invention as that of claim 4 except additional claimed limitation of “each of the characters comprises a plurality of bits per pixels.” However, Lobodzinski further discloses claimed invention that each of the characters C0-C256 comprises a plurality of bits per pixel (e.g., figure 3B). Therefore, the claim 6 is rejected for the reason as set forth above.

Lobodzinski further discloses claimed invention that at least one font array comprises a plurality of font arrays (e.g., figure 4A).

Lobodzinski further discloses claimed invention that each of the plurality of font arrays includes a plurality of characters (e.g., figures 3B and 4B).

Lobodzinski further discloses claimed invention that characters within different font arrays can be different sizes (e.g., figures 4B and 5).

Claim 12:

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The claim 12 encompasses the same scope of the invention as that of claim 4 except additional claimed limitation of “each of the characters includes size height information.” However, Lobodzinski further discloses claimed invention that each of the characters includes size height information (e.g., column 6, lines 60-65). Therefore, the claim 13 is rejected for the reason as set forth above.

Claim 13:

The claim 13 encompasses the same scope of the invention as that of claim 4 except additional claimed limitation of “each of the characters includes size width information.” However, Lobodzinski further discloses claimed invention that each of the characters includes size width information (e.g., column 6, lines 60-65). Therefore, the claim 13 is rejected for the reason as set forth above.

Claim 16:

The claim 16 encompasses the same scope of the invention as that of claim 14 except additional claimed limitation of “the set of registers includes a font pitch register.” However, Lobodzinski further discloses claimed invention that the set of registers includes a font pitch register (e.g., figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Examiner interprets the TXE Command Reg1 register as a font pitch register in the claimed invention because the TXE Command Reg1 register has bits information (5-3) of font pitch. Therefore, the claim 16 is rejected for the reason as set forth above.

Claim 17:

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The claim 17 encompasses the same scope of the invention as that of claim 14 except additional claimed limitation of “the set of registers includes an index register.” However, Lobodzinski further discloses claimed invention that the set of registers includes an index register (see figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Examiner interprets the TXE String Address register as an index register in the claimed invention that stores address of *character indexes*. Therefore, the claim 17 is rejected for the reason as set forth above.

Claim 18:

The claim 18 encompasses the same scope of the invention as that of claim 14 except additional claimed limitation of “a horizontal information register.” However, Lobodzinski further discloses claimed invention of a horizontal information register (see figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Examiner interprets the TXE Destination X register as a horizontal information register in the claimed invention because the TXE Destination X register stores onscreen X location (horizontal location) for text string to be drawn in accordance with the table 1 of the Lobodzinski reference. Therefore, the claim 18 is rejected for the reason as set forth above.

Claim 19:

The claim 19 encompasses the same scope of the invention as that of claim 14 except additional claimed limitation of “a vertical information register.” However, Lobodzinski further discloses claimed invention of a vertical information register (see figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Office interprets the TXE Destination Y register as a vertical information register in the claimed

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invention because the TXE Destination Y register stores onscreen Y location (vertical location) for text string to be drawn in accordance with the table 1 of the Lobodzinski reference. Therefore, the claim 18 is rejected for the reason as set forth above.

Claim 20:

The claim 20 encompasses the same scope of the invention as that of claim 14 except additional claimed limitation of “a linear information register.” However, Lobodzinski further discloses claimed invention of a linear information register (see figure 2, TABELE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Examiner interprets the TXE String Address register or TXE Font Address register as a linear information register in the claimed invention because any of two registers stores *linear* dword address. Therefore, the claim 20 is rejected for the reason as set forth above.

Claim 24:

The claim 24 encompasses the same scope of the invention as that of claim 1 except additional claimed limitation of “a size width register.” However, Lobodzinski further discloses claimed invention of a size width register that contains the width of an output monochrome rectangle (see figure 2, TABELE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Examiner interprets the TXE Character Count register as a size width register in the claimed invention because the reference teaches that TXE Character Count register is the same as BLT width register and stores the number of text glyphs to be drawn. Therefore, the claim 20 is rejected for the reason as set forth above.

Claim 25:

The claim 25 encompasses the same scope of the invention as that of claim 1 except additional claimed limitation of “a size height register.” However, Lobodzinski further discloses claimed invention of a size height register that contains the height of an output monochrome rectangle (see figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The Examiner interprets the TXE Height register as a size height register in the claimed invention because the reference teaches that TXE Height register is the same as BLT height register and stores the number of scan-lines of text to be drawn. Therefore, the claim 20 is rejected for the reason as set forth above.

2. Claim 26:

The claim 26 is a rephrasing of claim 1 in a method form. However, Lobodzinski discloses in column 4 that the coordinate in viewport 58 is updated to which the font will be written and instructs the BLT engine 50 to perform a screen-to-screen color expanded BLT of the monochrome image. Lobodzinski further discloses selecting one of the first and second font arrays using an address specified in a first register of a graphics controller. Lobodzinski further discloses the text engine reads through the string of character indexes (see column 3, lines 30-33 and Fig. 5) and width vectors, **calculates the address of the character**, updates the X-coordinate in the viewport 58 and instructs the BLT engine 50 to perform a screen-to-screen color expanded BLT of the monochrome image. The address registers listed in Table 1 include a TXE Font Address register, the TXE String address register, TXE height register and TXE character count register. Lobodzinski discloses the text engine calculates the address information for these registers. Therefore, Lobodzinski discloses a first register for holding glyph information

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for a character in the font including one of the TXE address registers for holding glyph information for a character in the font. Lobodzinski discloses a TXE Font address register that specifies an address for the font array for the font. Lobodzinski further discloses a third register that contains an index to the character in the font array (TXE String address register contains linear dword address of character indexes and width vector for string to be drawn; see Table 1 and Fig. 5).

. The claim 26 is thus subject to the same rationale of rejection set forth in claim 1.

Claims 27-28, and 33-36:

Claims 27-28 and 33-36 is a rephrasing of claims 2-6 in a method form. The claim is rejected for the same reason as set forth respectively in claims 2-6.

Claims 39 and 41-43:

Claims 39 and 41-43 is a rephrasing of claims 16-20 in a method form. The claim is rejected for the same reason as set forth respectively in claims 16-20.

Claims 46-47:

Claims 46-47 is a rephrasing of claims 24-25 in a method form. The claim is rejected for the same reason as set forth respectively in claims 24-25.

Re Claim 48:

The claim 48 encompasses the same scope of invention as that of the claim 1 except additional claim limitation to render the character by the central processing unit is required to transfer to said graphics controller only an index value for the character, an x-value indicating a horizontal position for the character and a y-value indicating a vertical position for the character.

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However, Lobodzinski further discloses a horizontal information register (see figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The TXE Destination X register stores onscreen X location (horizontal location) for text string to be drawn in accordance with the table 1 of the Lobodzinski reference. Lobodzinski further discloses a vertical information register (see figure 2, TABELLE I, column 4, lines 30-33, column 5, lines 33-49, column 7, lines 1-59 and column 9, lines 5-25). The TXE Destination Y register stores onscreen Y location (vertical location) for text string to be drawn in accordance with the table 1 of the Lobodzinski reference. The claim 48 is thus subject to the same rationale of rejection set forth in the claim 1.

Re Claims 49-50 and 53:

Claims 49-50 and 53 encompass the same scope of invention as that of claims 2-6, 12-13 and 16-19. The claims are rejected for the same reason as set forth in claims 2-6, 12-13 and 16-19.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw



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